UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,403	03/05/2001	Thulasiraman Jeyaraman	SUN1P806/P5418	2707

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EXAMINER
DUONG, THOMAS

ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
		09/800,403	JEYARAMAN ET AL.
Office Action Summary		Examiner	Art Unit	
		Thomas Duong	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 October 2005</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-2, 4-6, 25-26, 28, 35-36, 38-40, and 51-53* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2, 4-6, 25-26, 28, 35-36, 38-40, and 51-53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This office action is in response to the applicants Pre-Appeal Brief Request For Review filed on December 27, 2005. *Claims 1-2, 4-6, 25-26, 28, 35-36, 38-40, and 51-53* are presented for further consideration and examination.

2.   Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

3.   In view of the Pre-Appeal Brief Request For Review filed on December 27, 2005, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

Response to Argument

4.   Applicant's arguments, see pg.5–pg.7, filed on December 27, 2005, with respect to *claims 1-2, 4-6, 25-26, 28, 35-36, 38-40, and 51-53* have been fully considered and are persuasive. The finality of previous rejection is withdrawn.

Claim Objections

5.   <u>Claims 4-5</u> are objected to because of the following informalities:

- *claims 4-5* appear to depend on *claim 1*.

During the course of prosecution, examiner will treat as such. Please make the appropriate correction.

Double Patenting

6.   The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7.   *Claims 1, 25, 35, and 51-53* rejected on the ground of nonstatutory obviousness-type

double patenting as being unpatentable over *claims 1 and 9* of U.S. Patent No.

US006332165B1. Although the conflicting claims are not identical, they are not

patentably distinct from each other because they are both directed to start a local

transaction before starting a global transaction.

8.   *Claims 1, 25, 35, and 51-53* rejected on the ground of nonstatutory obviousness-type

double patenting as being unpatentable over *claims 1 and 9* of U.S. Patent No.

US006351795B1. Although the conflicting claims are not identical, they are not

patentably distinct from each other because they are both directed to start a local

transaction before starting a global transaction.

Claim Rejections - 35 USC § 112

9.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10.   *Claims 40 and 53* are rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the enablement requirement. The claims contains subject matter, which is not

described in such a way as to enable one skilled in the art to which it pertains, or with

which it is most nearly connected, to make and/or use the invention. The specification

does not show how the computer program product stored in a computer readable

medium can perform the modules claimed. Please clarify the language of the claim.

11.   _Claims 40 and 53_ are rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the written description requirement. The claim(s) contains subject matter, which

was not described in the specification in such a way as to reasonably convey to one

skilled in the relevant art that the inventor(s), at the time the application was filed, had

possession of the claimed invention. The specification does not disclose the computer

readable medium as claimed.. Please clarify the language of the claim.

Claim Rejections - 35 USC § 101

12.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

13.   _Claims 40 and 53_ are rejected under 35 U.S.C. 101 because the claims are not limited to

tangible embodiments since they are stored on an unspecified computer readable

medium as claimed. As such, the claim is not limited to statutory subject matter and is

therefore non-statutory. To overcome this type of 101 rejection the claims need to be

amended to include only the physical computer media and not a transmission media or

other intangible or non-functional media. For the specification at the bottom, carrier

medium and transmission media would be not statutory but storage media would be

statutory.

Claim Rejections - 35 USC § 102

14.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. *Claims 51-53* are rejected under 35 U.S.C. 102(b) as being anticipated by Raz (US005504899A).

16. With regard to *claims 51-53*, Raz discloses,

- *receiving a request to start the transaction;* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"a processor 145 in a distributed transaction processing system that uses the preferred atomic commitment protocol to process global transactions. The processor also processes local transactions. The local transactions, for example, are issued by a local user 146 such as an application program executed by the processor. Global transactions issued by the local user are coordinated by the transaction manager 147, the functions as the atomic commitment coordinator for these global transactions"* (Raz, col.21, lines 53-61). In addition, according to Raz, *"in any case, the transaction scheduler receives the transaction request and puts the transaction request into an entry of the transaction list"* (Raz, col.22, lines 24-26). Hence, Raz teaches of receiving requests to start a transaction and storing the transaction request.

- *storing information which indicates that the request to start the transaction was received;* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"in any case, the transaction scheduler receives the transaction request and puts the transaction request into an entry of the transaction list"* (Raz, col.22, lines 24-26). Hence, Raz teaches of receiving requests to start a transaction and storing the transaction request.

- *accessing a first resource manager associated with the transaction;* (Raz, col.21,

  line 52 – col.23, line 6)

  Raz discloses, *"each transaction should be assumed to be a global, but in this*

  case any optimization of the local concurrency control for local transaction is lost.

  When an optimistic local concurrency control is used, for example, knowledge

  that a transaction is local can be used any time before the transaction is decided"

  (Raz, col.22, lines 14-19). In addition, Raz discloses, *"the transaction scheduler*

  eventually transfer execution to the transaction, and the transaction is executed

  until either it becomes inhibited or it becomes ready" (Raz, col.22, lines 26-29).

  Hence, Raz teaches of executing the transaction as a local transaction

  immediately without deciding if it should be a local or a global transaction.

- *initiating the transaction as a local transaction on the first resource manager*

  without knowledge of whether the transaction is more appropriate to be a local

  transaction or a global transaction; and (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"each transaction should be assumed to be a global, but in this*

  case any optimization of the local concurrency control for local transaction is lost.

  When an optimistic local concurrency control is used, for example, knowledge

  that a transaction is local can be used any time before the transaction is decided"

  (Raz, col.22, lines 14-19). In addition, Raz discloses, *"the transaction scheduler*

  eventually transfer execution to the transaction, and the transaction is executed

  until either it becomes inhibited or it becomes ready" (Raz, col.22, lines 26-29).

  Hence, Raz teaches of executing the transaction as a local transaction

  immediately without deciding if it should be a local or a global transaction until it

  becomes inhibited or it becomes ready.

- *completing the transaction,* (Raz, col.21, line 52 – col.23, line 6)

    Raz discloses, *"the transaction scheduler eventually transfer execution to the*

    transaction, and the transaction is executed until either it becomes inhibited or it

    becomes ready" (Raz, col.22, lines 26-29). Hence, Raz teaches of executing the

    transaction as a local transaction immediately without deciding if it should be a

    local or a global transaction until it becomes inhibited or it becomes ready.

Claim Rejections - 35 USC § 103

17.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

18.   *Claims 1-2, 4-6, 25-26, 28, 35-36, and 38-40* are rejected under 35 U.S.C. 103(a) as

being unpatentable over Raz (US005504899A) and in view of McKeehan et al.

(US006061708A).

19.   With regard to *claims 1, 25, and 35,* Raz discloses,

- *receiving a request to start the transaction;* (Raz, col.21, line 52 – col.23, line 6)

    Raz discloses, *"a processor 145 in a distributed transaction processing system*

    that uses the preferred atomic commitment protocol to process global

    transactions. The processor also processes local transactions. The local

    transactions, for example, are issued by a local user 146 such as an application

    program executed by the processor. Global transactions issued by the local user

are coordinated by the transaction manager 147, the functions as the atomic

commitment coordinator for these global transactions" (Raz, col.21, lines 53-61).

In addition, according to Raz, "in any case, the transaction scheduler receives

the transaction request and puts the transaction request into an entry of the

transaction list" (Raz, col.22, lines 24-26). Hence, Raz teaches of receiving

requests to start a transaction and storing the transaction request.

- *storing information which indicates that the request to start the transaction was*

  received; (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, "in any case, the transaction scheduler receives the transaction

  request and puts the transaction request into an entry of the transaction list"

  (Raz, col.22, lines 24-26). Hence, Raz teaches of receiving requests to start a

  transaction and storing the transaction request.

- *accessing a first resource manager associated with the transaction;* (Raz, col.21,

  line 52 – col.23, line 6)

  Raz discloses, "each transaction should be assumed to be a global, but in this

  case any optimization of the local concurrency control for local transaction is lost.

  When an optimistic local concurrency control is used, for example, knowledge

  that a transaction is local can be used any time before the transaction is decided"

  (Raz, col.22, lines 14-19). In addition, Raz discloses, "the transaction scheduler

  eventually transfer execution to the transaction, and the transaction is executed

  until either it becomes inhibited or it becomes ready" (Raz, col.22, lines 26-29).

  Hence, Raz teaches of executing the transaction as a local transaction

  immediately without deciding if it should be a local or a global transaction.

- *initiating the transaction as a local transaction on the first resource manager without first determine whether the transaction is appropriate to be a local transaction; and* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"each transaction should be assumed to be a global, but in this case any optimization of the local concurrency control for local transaction is lost. When an optimistic local concurrency control is used, for example, knowledge that a transaction is local can be used any time before the transaction is decided"* (Raz, col.22, lines 14-19). In addition, Raz discloses, *"the transaction scheduler eventually transfer execution to the transaction, and the transaction is executed until either it becomes inhibited or it becomes ready"* (Raz, col.22, lines 26-29). Hence, Raz teaches of executing the transaction as a local transaction immediately without deciding if it should be a local or a global transaction until it becomes inhibited or it becomes ready.

- *completing the transaction,* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"the transaction scheduler eventually transfer execution to the transaction, and the transaction is executed until either it becomes inhibited or it becomes ready"* (Raz, col.22, lines 26-29). Hence, Raz teaches of executing the transaction as a local transaction immediately without deciding if it should be a local or a global transaction until it becomes inhibited or it becomes ready.

- *wherein the method further includes:*

  - *initiating the transaction as a global transaction after initiating the transaction as the local transaction; and* (Raz, col.21, line 52 – col.23, line 6)

    Raz discloses, *"the transaction scheduler may commit a ready local transaction. To insure global synchronization is a distributed transaction*

processing system, however, a ready global transaction is committed only

after a handshake with the coordinator 147" (Raz, col.22, lines 36-40). In

addition, Raz discloses, *"this handshake insures that a global transaction is*

not committed unless all of the processors that are processing assigned

portions of the global transaction are also ready to commit their assigned

portions of the global transaction. Therefore, when the state of a global

transaction changes from the 'active' to the 'ready' state, a 'prepared' signal

is transmitted to the coordinator 147" (Raz, col.22, lines 4046). Hence, Raz

teaches of executing the transaction as a local transaction immediately

without deciding if it should be a local or a global transaction until it becomes

inhibited or becomes ready using a 2-phase commit optimization procedure.

However, Raz does not explicitly disclose,

- *completing both the local transaction and the global transaction substantially*
  atomically using a last resource 2-phase commit optimization.

McKeehan teaches,

- *completing both the local transaction and the global transaction substantially*
  atomically using a last resource 2-phase commit optimization. (McKeehan,
  col.1, line 45 – col.2, line 32; col.3, lines 23-62; col.4, line 37 – col.7, line 9)

McKeehan discloses, *"when an application accesses multiple resources such*

as files, databases, and message queues, the transaction manager co-

ordinates the updates to these resources, ensuring that either all updates are

performed together or none are performed. It uses a method known as the

two-phase commit procedure to achieve this. The two-phase commit

procedure includes a voting phase in which resource manager indicates that

his resource is prepared to commit, and a commit phase indicating that the

data has been changed or updated. If the voting phase indicates a problem

the data is not committed and the transaction does not occur" (McKeehan,

col.1, lines 53-64). Hence, McKeehan teaches of a distributed computing

environment capable of supporting the two-phase commit procedure.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention was made to combine the teachings of McKeehan with the teachings of

Raz to *"[optimize] of the local concurrency control for local transaction"* (Raz, col.22,

lines 15-16). According to Raz, *"when an optimistic local concurrency control is*

used, for example, knowledge that a transaction is local can be used at any time

before the transaction is decided" (Raz, col.22, lines 16-19).

20.   With regard to *claims 2, 26, and 36*, Raz and McKeehan disclose,

   - *wherein completing the transaction includes using a local transaction mechanism*
     of the first resource manager. (Raz, col.21, line 52 – col.23, line 6; McKeehan,
     col.1, line 45 – col.2, line 32; col.3, lines 23-62; col.4, line 37 – col.7, line 9)

21.   With regard to *claims 4 and 38*, Raz and McKeehan disclose,

   - *wherein completing both the local transaction and the global transaction*
     substantially atomically includes using the local transaction as a last resource 2-
     phase commit optimization. (Raz, col.21, line 52 – col.23, line 6; McKeehan,
     col.1, line 45 – col.2, line 32; col.3, lines 23-62; col.4, line 37 – col.7, line 9)

22.   With regard to *claims 5 and 39*, Raz and McKeehan disclose,
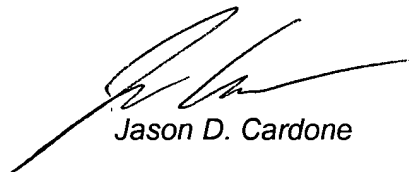
- *further including lazily determining whether to initiate the global transaction.* (Raz, col.21, line 52 – col.23, line 6; McKeehan, col.1, line 45 – col.2, line 32; col.3, lines 23-62; col.4, line 37 – col.7, line 9)

23.   With regard to <u>claims 6, 28 and 40</u>, Raz and McKeehan disclose,

- *wherein the enterprise environment is a Java 2 Enterprise Environment and receiving the request to start the transaction includes receiving the request from a component associated with the Java 2 Enterprise Environment.* (McKeehan, col.6, line 59 – col.7, line 9; col.9, line 55 – col.10, line 6; col.11, lines 47-67)

Conclusion

24.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason D. Cardone can be reached on 571/272-3933. The fax phone numbers for the organization where this application or proceeding is assigned are 571/273-8300 for regular communications and 571/273-8300 for After Final communications.

Thomas Duong (AU2145)

May 14, 2006

Jason D. Cardone

Supervisory PE (AU2145)